

Goal:

Design and implement program to maintain Equity Positions with unit tests.

Input:

Transactions

TransactionID	TradeID	Version	SecurityCode	Quantity	Insert/Update/Cancel	Buy/Sell
1	1	1	REL	50	INSERT	Buy
2	2	1	ITC	40	INSERT	Sell
3	3	1	INF	70	INSERT	Buy
4	1	2	REL	60	UPDATE	Buy
5	2	2	ITC	30	CANCEL	Buy
6	4	1	INF	20	INSERT	Sell

TransactionID: Primary key (auto generated)

TradeID: Trade Identifier

Version: Starts with 1 for given Trade ID

SecurityCode: Security Identifier e.g. INF => Infosys

Quantity: Quantity of security e.g. 10 Infosys shares

Output:

Position

REL	+60
ITC	0
INF	+50

Rules:

- The Positions should be updated after each transaction e.g. once transaction 1 and 2 has arrived, the positions would be REL=+50 and ITC=-40
- INSERT / UPDATE / CANCEL are actions on a Trade (with same trade id but different version)
- INSERT will always be 1st version of a Trade, CANCEL will always be last version of Trade
- For UPDATE, SecurityCode or Quantity or Buy/Sell can change
- For CANCEL, any changes in SecurityCode or Quantity or Buy/Sell may change and should be ignored
- The transactions can arrive in any sequence i.e. UPDATE (version 2) can arrive before INSERT (version 1)

Evaluation Points

- Working Solution
- Requirement Analysis
- Design
- Test Coverage
- Code Quality